

In the Claims:

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Claim 1 (previously amended). A process for producing a composite structural element for impact protection and insulation, which comprises:

providing a thin-section wall part;

placing the thin-section wall part into a mold;

applying reinforcing elements made of a renewable raw material to the thin-section wall part for flexural rigidity and heat insulation;

placing a counter-mold onto the mold for forming a mold cavity;

introducing a binder having a foaming agent into said mold cavity, after a set time delay a foaming of the binder occurring to encapsulate the reinforcing elements.

Claim 2 (original). The process according to claim 1, which comprises introducing the binder having the foaming agent into an open mold.

Claim 3 (original). The process according to claim 1, which comprises using the binder having the foaming agent with a set time delay of less than 5 seconds for foaming the binder.

Claim 4 (original). The process according to claim 1, which comprises priming the thin-section wall part on a foam application side to improve adhesion before applying the binder.

Claim 5 (original). The process according to claim 1, which comprises backing the thin-section wall part with a hard shell formed with reinforcing elements by one of compression molding and injection molding before a formation of the mold cavity, and applying a second hard shell subsequently to the free side of the molding.

Claim 6 (original). The process according to claim 5, which comprises molding on transverse cross-pieces to the hard shell during the application of the hard shell.

Claim 7 (original). The process according to claim 5, which comprises forming a recycled core from one of a foam and a comparable light weight material and placing the recycled core in the reinforcing elements before the binder is injected.

Claim 8 (withdrawn). The process according to claim 1, wherein the step of applying reinforcing elements made of a renewable raw material to the thin-section wall part is performed by producing moldings and hard shells formed of the

reinforcing elements and bonding adhesively the moldings and the hard shells to the thin-section wall part.

Claim 9 (withdrawn). The process according to claim 8, which comprises producing the moldings with recycled cores.

Claim 10 (withdrawn). The process according to claim 8, which comprises producing the hard shells with transverse cross-pieces.

Claim 11 (previously added). The process according to claim 1, wherein the step of introducing the binder is performed by using injection cannulas.

Claim 12 (previously added). The process according to claim 1, wherein the step of introducing the binder is performed by using injection nozzles.

Claim 13 (previously added). The process according to claim 1, wherein the step of applying reinforcing elements made of renewable raw material is performed by using dicotyledons as reinforcing elements.

Claim 14 (previously added). The process according to claim 1, wherein the step of applying reinforcing elements made of

renewable raw material is performed by using monocotyledons as reinforcing elements.

Claim 15 (previously added). The process according to claim 1, wherein the step of foaming the binder is performed to encapsulate the reinforcing elements on all sides.

Claim 16 (new). The process according to claim 1, further comprising providing a structural element, and securing the structural element to the composite structural element while leaving a channel between the structural element and the composite structural element

Claim 17 (new). A process for producing a composite structural element for a vehicle to dissipate and introduce an impact force acting upon the composite element to an adjoining load-bearing part of the vehicle, which comprises:

providing a thin-section wall part forming an outer skin of the vehicle and having an internal surface;

applying reinforcing elements to the internal surface of the thin-section wall part, the reinforcing elements extending across and beyond the thin-section wall part overlapping the adjoining load-bearing part; and

applying a binder having a foaming agent, and foaming the binder for embedding the reinforcing elements, to form the composite element.

Claim 18 (new). The process according to claim 17, wherein the step of applying the binder is performed by:

placing the thin-section wall into a mold;

placing a counter-mold onto the mold for forming a mold cavity; and

introducing the binder into the mold cavity.

Claim 19 (new). The process according to claim 17, wherein the step of introducing the binder is performed by using injection cannulas or nozzles.

Claim 20 (new). The process according to claim 17, wherein the step of applying reinforcing elements is performed by using reinforcing elements made of renewable raw material.

Claim 21 (new). The process according to claim 17, wherein the step of applying reinforcing elements is performed by using reinforcing elements made of material other than renewable raw material.

Claim 22 (new). The process according to claim 17, wherein the step of foaming the binder is performed to embed the reinforcing elements.

Claim 23 (new). The process according to claim 18, wherein the step of foaming the binder is performed with a time delay after the step of introducing the binder into the mold cavity.

Claim 24 (new). The process according to claim 17, wherein the step of applying reinforcing elements to the thin-section wall part is performed to place the reinforcing elements being disposed in parallel with a longitudinal axis of the thin-section wall.

Claim 25 (new). The process according to claim 17, wherein the step of applying reinforcing elements is performed by using reinforcing elements made of renewable raw material, and the renewable raw material is selected from the group consisting of stalks, stalk sections, fibers, bundles of fibers, twisted yarns, filaments, shives, nonwovens, wovens and rovings.

Claim 26 (new). The process according to claim 17, wherein the step of applying a binder having a foaming agent is performed by using a binder selected from the group consisting of foamable synthetic, a biological derived substance, a

naturally derived substance, matrices of natural substances and matrices of synthetic substances.

Claim 27 (new). The process according to claim 17, which further comprises providing low weight recycled cores in regions of low tensile and compressive stress.

Claim 28 (new). The process according to claim 27, wherein the recycled cores are unreinforced recycled products, formed with cores selected from the group consisting of foam, foam granules, preformed parts, prebonded parts, foam-textile combinations and textiles.

Claim 29 (new). The process according to claim 17, wherein the step of applying reinforcing elements to the thin-section wall part is performed by using reinforced elements produced separately.

Claim 30 (new). The process according to claim 17, wherein the step of providing a thin-section wall part is carried out by using a thin-section wall part made of sheet metal.

Claim 31 (new). The process according to claim 17, which further comprises foaming a molding by applying a binder, foaming the binder, and embedding the reinforcing elements.

Claim 32 (new). The process according to claim 17, which further comprises bonding the reinforcing element to the thin-section wall by applying a binder and foaming the binder adhesively.

Claim 33 (new). The process according to claim 17, further comprising providing a structural element, and securing the structural element to the composite structural element while leaving a channel between the structural element and the composite structural element.

Claim 34 (new). A structural element for a vehicle adjoining a load-bearing part of the vehicle, comprising:

a composite element for dissipating and introducing impact forces acting upon said composite element into the adjoining load-bearing part of the vehicle, said composite element including:

a thin-section wall part forming a portion of an outer skin of the vehicle and having an internal surface; and

reinforcing elements being embedded by a foamed binder, said reinforcing elements extending across and beyond said internal surface of said thin-section wall part overlapping the adjoining load-bearing part, to form the composite element.



Claim 35 (new). The structural element according to claim 34, wherein said reinforcing elements are adhesively bonded to said thin-section wall part.